



Institut Pertanian Bogor (IPB)

Research Funding and Systems: *Lessons learned from IPB*

By

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Outline

- **Small vs large research systems**
- **R&D budget & leaders**
- **Need for research consortia & sound science management**
- **Research platform & lessons learned IPB**
- **Closing**

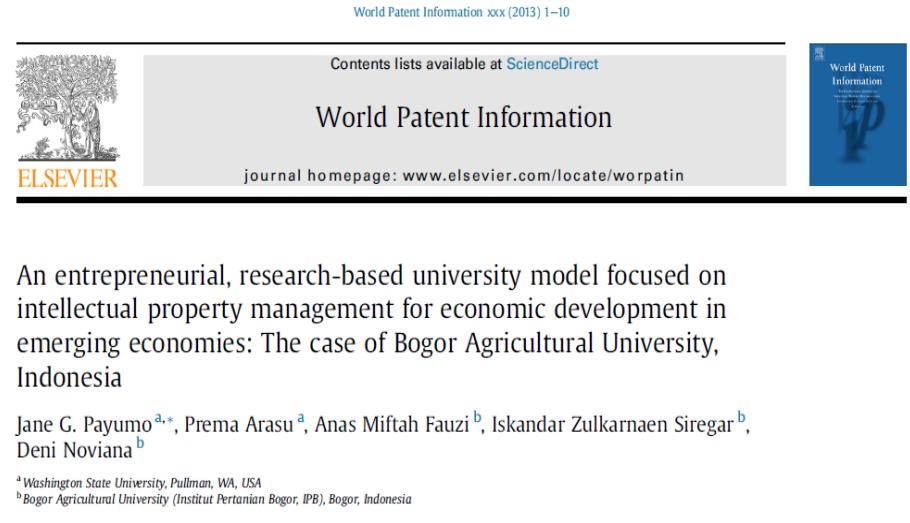


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Small vs large research systems

Additional role of HEI - IPB

- One century of Indonesia's Independence → New Vision 2045
“To be a leading university in strengthening nation dignity through globally excellent higher education on **tropical agriculture, marine and biosciences**”
- IPB Statute (PP No. 66/2013)



Nowadays apart from **teaching, research** and **outreach, economic development** has become also an additional important pillar (Payumo et al. 2013).

Research Agenda – IPB

Food-Energy-Ecology-Poverty-Biomedicine



International Agenda :

Sustainable Development

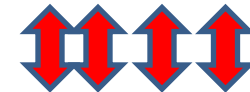
CBD/Nagoya Protocol

IPCC/Kyoto Protocol

Millennium Development Goal

Trade & Investment/WTO/AEC

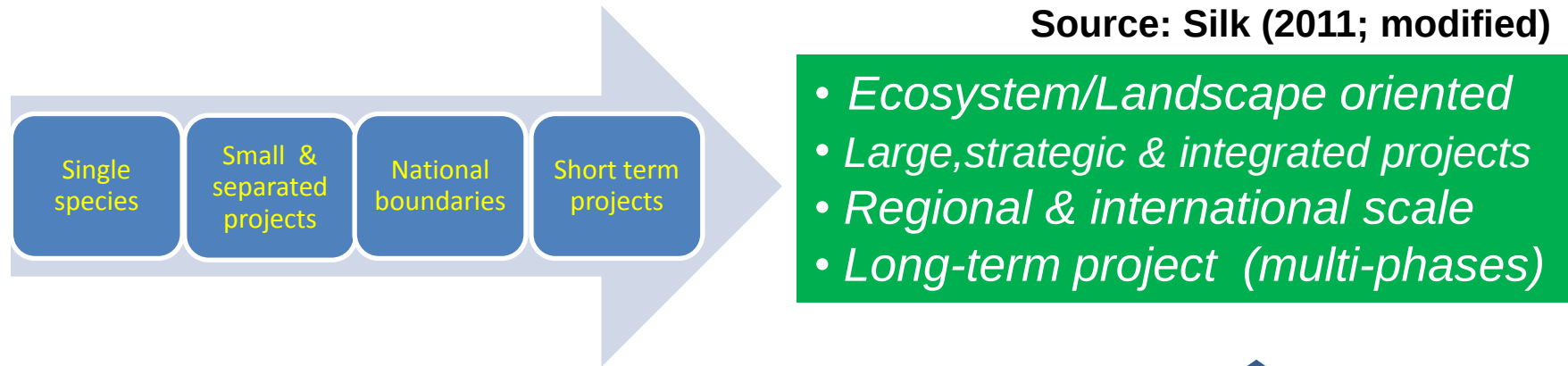
etc.



*Collaborative
Research Themes
& consortia??*

Trend in research system

Source: Silk (2011; modified)



Top Reasons for Internationalization	
1. Mobility and Exchanges for Students and Teachers	7. International and Intercultural Understanding
2. Teaching and Research Collaboration	8. Promotion and Profile of Institution
3. Academic Standards and Quality	9. Diversify Source of Faculty and Students
4. Research Projects	10. Regional Issues and Integration
5. Co-operation and Development Assistance	11. International Student Recruitment
6. Curriculum Development	12. Diversify Income Generation



IPB Strategy:
Capacity Building
Reputation Building



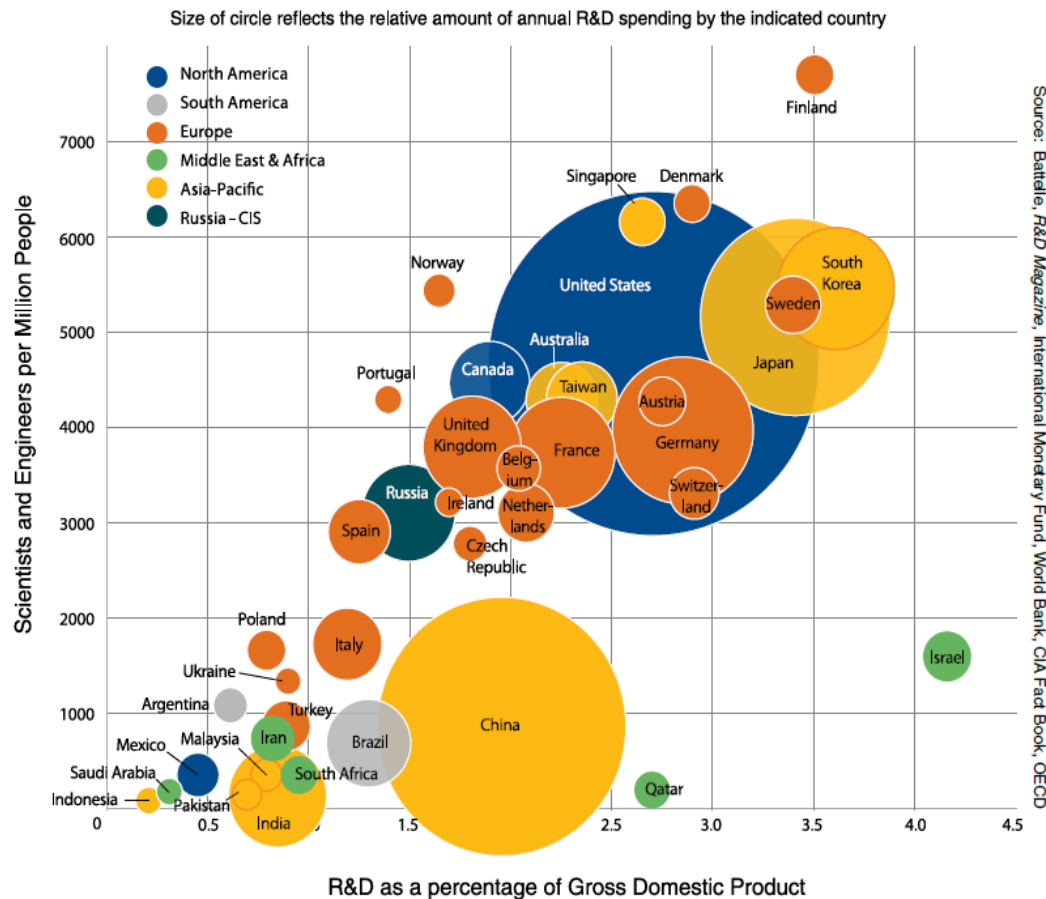
Source: IAU (2003)



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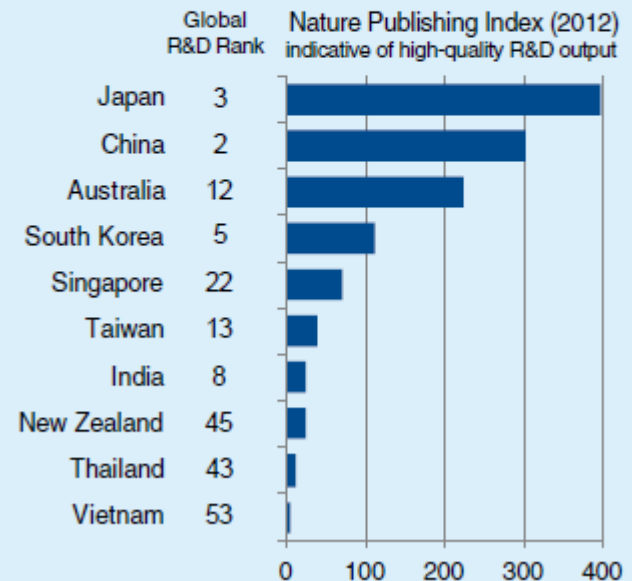
R&D Budget & leaders

Global Innovation Index



Asian research output and quality is not limited to China: Japan remains internationally strong, and South Korea's rate of R&D investment shows in publication volume and quality.

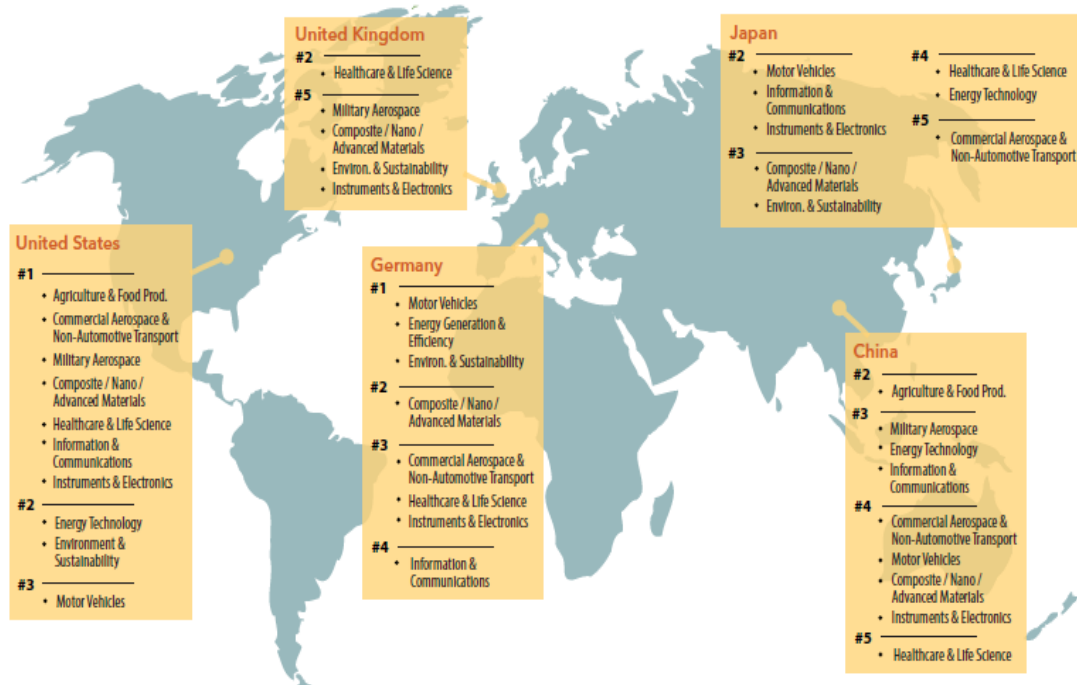
Source: Nature Publishing. Figures are papers in Nature-affiliated journals



R&D spending & outputs (Battelle, 2014)

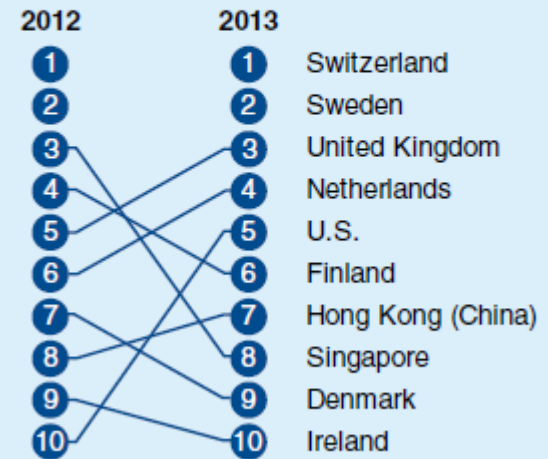
Global Innovation Index

Researcher-Ranked Global R&D Leaders by Technology Area



Source: Battelle, R&D Magazine

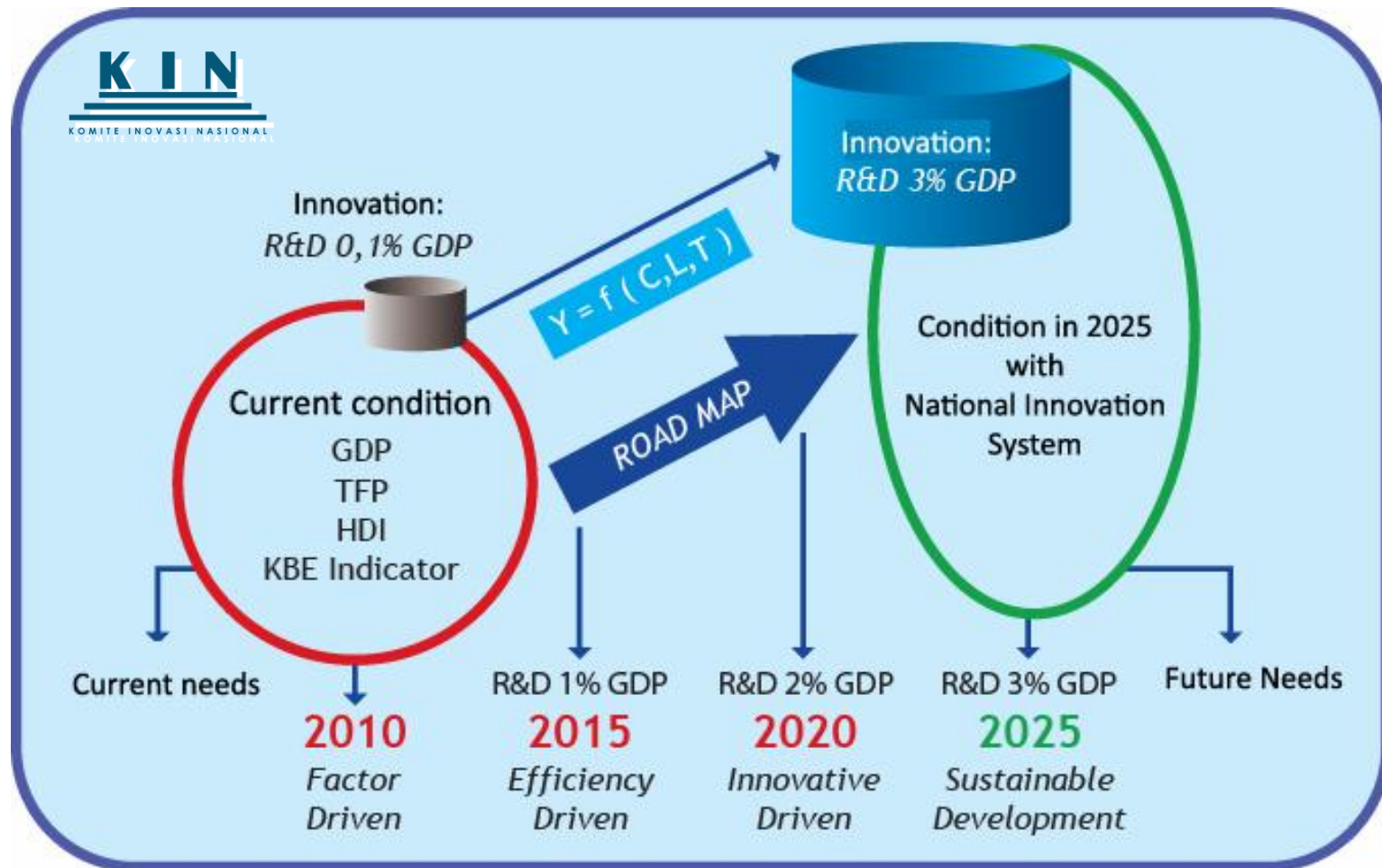
Europe and the U.S. continue to dominate the top positions in WIPO's Global Innovation Index.



Source: World Intellectual Property Org.

Global R&D leaders (Battelle, 2014)

Road Map: Master Plan 2025 (source: KIN)



(Note: We need inputs to develop this MP!)



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Need for research consortia & sound science management

Reasons

- **HEI's capacity → differences/variability, mutual exchanges, learning processes etc.**
- **Resource sharing → commitment, mechanism etc.**
- **Intercultural relations → North – South & South-South dialogues, scientist mobility etc.**
- **ASEAN integration → credit transfer, accreditation/certification etc.**
- **Others: biodiversity hotspots or rich bio-resources, emerging markets & economy, production bases etc.**

Associated problems

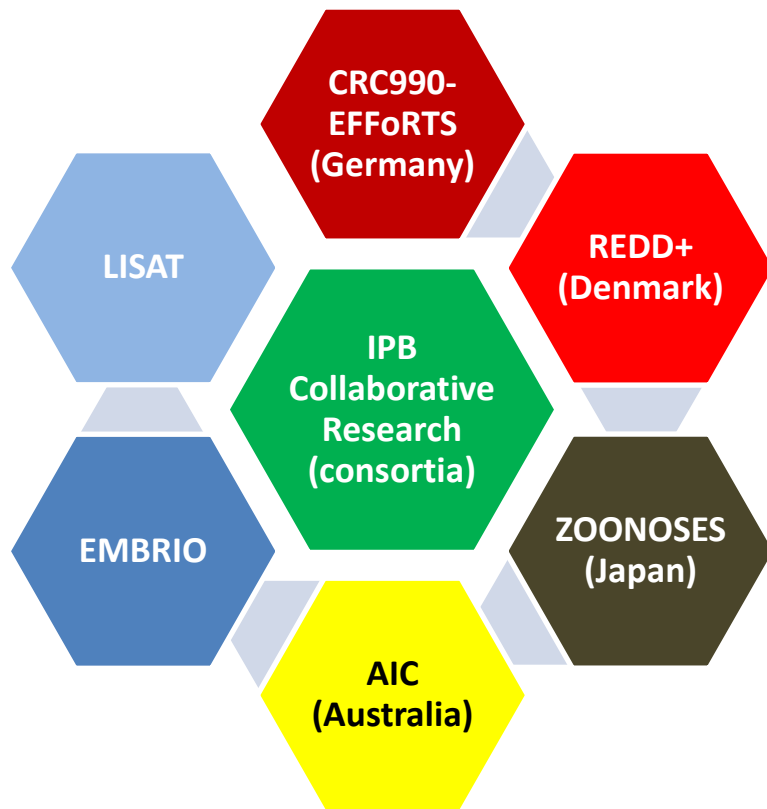
- **Weak research management → resource allocation?**
- **Dominated by a single person/institution → negotiation?**
- **Not institutionalized → financial transfer mechanism?**
- **No legal aspects → decision making?**
- **Others: Fund raising strategy etc.**



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Research Platform & lessons learned IPB

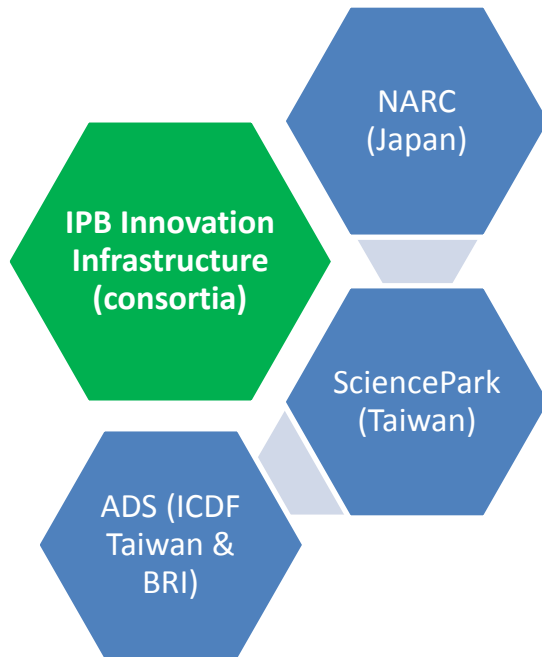
Larger strategic research platforms



At IPB, all research initiatives are facilitated by Directorate for Research & Innovation and coordinated with LPPM

Research Platforms	Research Area	Main Source of Funding
CRC990 – EFFoRTS	Ecology & Socio-economy	DFG
REDD+	Environment & Climate Change	DANIDA
ZOONOSSES	Health & Biomedicine	JST/SATREPS, JICA
AIC	Food & Agriculture	AIC , DIKTI
EMBRIO	Marine Biodiversity	IPB, DIKTI
LISAT	Remote Sensing/Satellite	LAPAN, IPB, DIKTI

Larger strategic research platforms

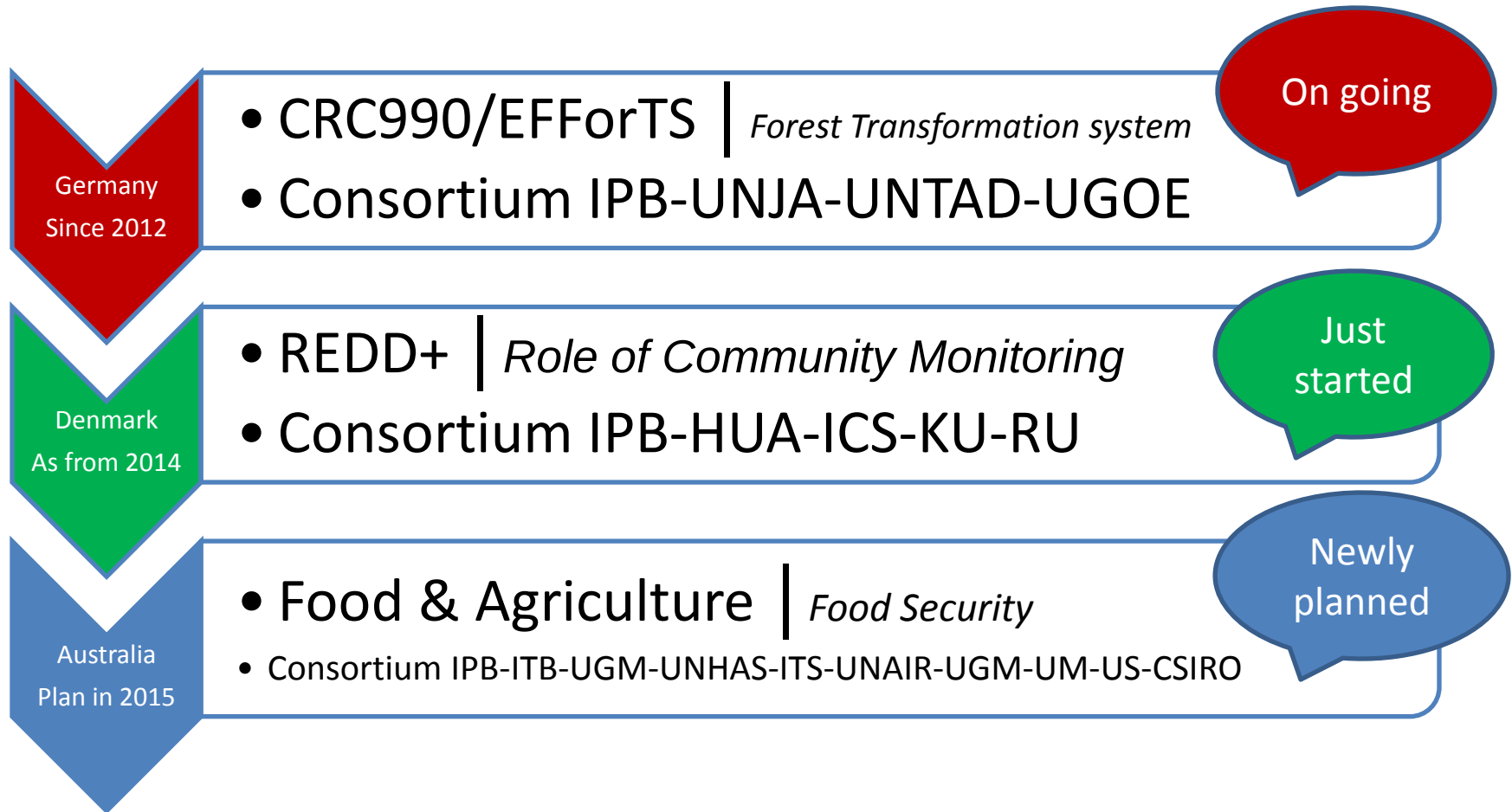


Innovation Platforms	Research Area	Main Source of Funding
NARC (New Academic Research Cluster) -Preparatory phase-	Food & Agriculture (<i>Bio-pharmaca & Seed Industry</i>)	Public Private Partnership (PPP)
IPB Taman Kencana SciencePark	Science based business (<i>marine instruments, functional food, bio-pharmaca</i>), <i>service lab.</i>	PT. BLST (<i>IPB holding company</i>), CSR, APBN
ADS (Agribusiness Development Station) -Handover-	Community empowerment & GAP – <i>Horticulture products</i>	Commercial sales, CSR



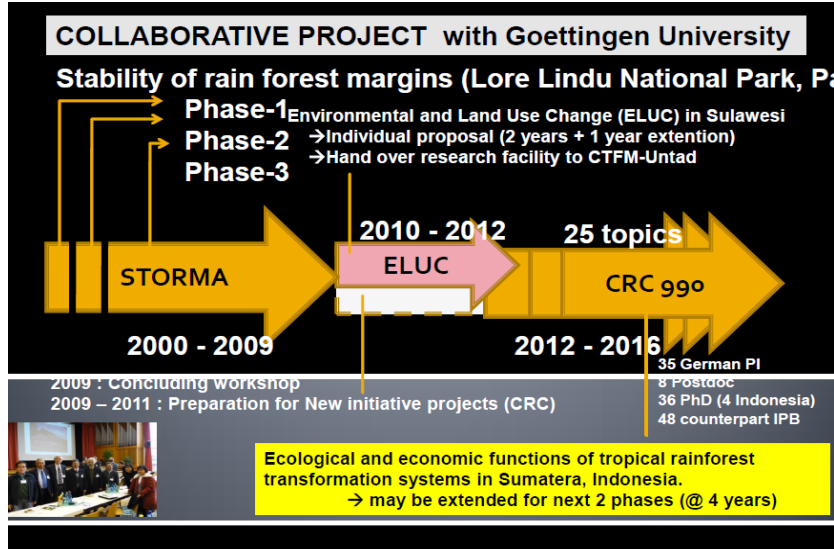


Larger strategic research platforms



CRC990/EFForTS

DFG & associated DIKTI Fund



- Continuation of 9 year STORMA Research in Palu (Central Sulawesi), funded by DFG
- Since 2012, a research consortium of CRC990/EFForTS (UGOE-IPB-UNJA-UNTAD) located in Jambi. **“Snow-ball effects”** are recognized.

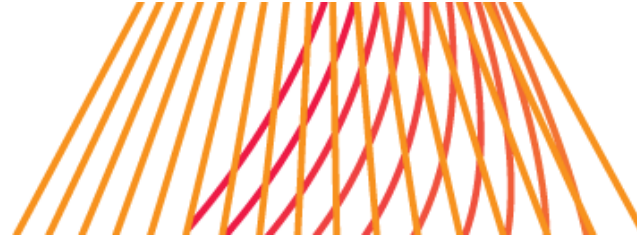
- Other associated larger activities (non-research components): Erasmus Mundus (EXPERTSASIA, ALFABET), DAAD (HEP, Alumni)
- Preparation towards the 2nd Phase (2015-2018): New research design and topics are being finalized for project extension.

REDD+ | DANIDA



- Since early 2014 and 3 PhDs has been enrolled in IPB graduate school
- Research sites have been selected, namely: Berau District (East Borneo)
- Joint PhD supervision with Univ. Copenhagen, Roskilde Univ.
- New associated research initiative has been proposed and awaiting for decision

Food & Agriculture | AIC & DIKTI



- New Consortium under Australia Indonesia Center – AIC & DIKTI
- IPB as coordinator of cluster Food and Agriculture in Indonesia → to be formalized
- Food Security is the main research theme
- The “*quick win*” strategies have been formulated

EMBRIO | *new research initiative*

Enhancing Marine Biodiversity Research in Indonesia (EMBRIO)
Definition of Research Clusters (DRAFT)

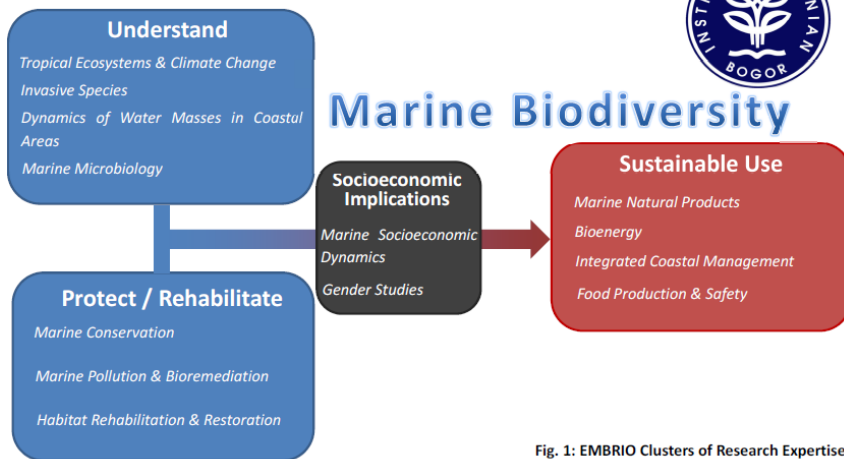


Fig. 1: EMBRIO Clusters of Research Expertise

- EMBRIO= Enhancing Marine Biodiversity Research in Indonesia
- Since 2013 initiated a and the white paper/concept note has been launched.

- Research proposals have been submitted to various national schemes (BOPTN, KLN DIKTI, SINAS, DNPI dll.)
- Promoting the consortium EMBRIO to national and international partners - MoUs with Uni. Jena, Uni. Oldenburg (DE) & Aarhus (DK)

Lessons learned | Funding

- MoA of collaborative research → Stating funding system and mechanism
- Financial transfer agreement (FTA) within consortium
- Joint Management Board (JMB) → Decision making on central fund allocation.
- Understanding the university status (state owned): PTN-BH, PTN-BLU, PTN-Satker → budget for research management in annual work plan.

Closing

- Research consortium may provide solutions for problems related to finance, expertises (skill & knowledge) as well as research infrastructure and facilities
- Sound management of large research platform is necessary to ensure the sustainability of collaboration (incl. non-research component) by internalizing research administration units at the respective HEI



Thank You